Curricular Integration of Problem-Knowledge Couplers: Improved Educational Outcomes with Reduced Educational Costs

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Education of health professionals is at a watershed period. The knowledge base is changing dramatically every year; the costs of providing traditional education to future health care providers is increasing; and the need for cost-containment in the health care field is reducing the ability of clinicians to spend requisite time mentoring health professions students. In addition to the global challenges facing health educators, there is normal variation between programs and individual educators in their teaching of the knowledge, skills, and attitudes deemed essential for effective health care delivery.

In an effort to address these problems, the health professions schools at the University of Vermont have adopted the use of Problem Knowledge Couplers[1] in key parts of the curricula in several health education programs. Use of the Couplers is both required and optional, depending on the program. However, students using the Couplers have expressed enthusiasm for the technology and clinical educators have uniformly supported use of Couplers as part of the educational process. Specifically, Couplers insure that students are presented with a standardized approach to critical elements of medical history taking, diagnosis and management of medical problems, and provider-patient communication which is essential to future practice.

In 1993, a Vertical Curriculum in Applied Medical Informatics was implemented at the University of Vermont College of Medicine.[2] As part of the curriculum, Problem Knowledge Couplers are introduced during matriculation when students are required to work through the Wellness Coupler on themselves to learn the importance of collecting a standardized body of knowledge on an individual's health status and how disseminating that knowledge leads to patient empowerment.

Couplers are again used during the core clerkships to teach the importance of collecting all relevant information on the unique patient problem. Because Couplers are problem-oriented and structured to provide a framework for information acquisition from and about the patient, students soon learn the necessity of a standardized approach to gathering essential information.

Use of the Couplers in the Schools of Nursing and Allied Health is similar in approach. The Department of Physical Therapy uses a subject specific Coupler and the School of Nursing is developing a curriculum for its new Nurse Practitioner Program which will rely heavily on the History, Physical and Wellness Couplers to insure that its students a well grounded in the basic precepts of a structured approach to patient information acquisition.

Even in Graduate Medical Education, Couplers have proved to be effective as a teaching tool. Radiology residents use the Lung Cancer Coupler to assist in diagnosis and shared medical decision making during the patient interview process. Use of the coupler has freed the attending from monitoring the patient provider interaction with the assurance that the resident is handling the case within a structured environment.

This Electronic Poster will demonstrate Problem Knowledge Couplers as they are used in the educational programs of the health professions schools at the University of Vermont. It will discuss cost savings realized in the educational process and show how the realization of the educational objectives has been enhanced by Coupler use.

References

1. Weed L. Knowledge Coupling: New Premises and New Tools for Medical Care and Education. New York: Springer-Verlag, Inc. 1991.
2. McGowan JJ. A vertical curriculum in applied medical informatics in support of rural primary care education. Acad Med. 1994; 69:430-431.

0195-4210/95/$5.00